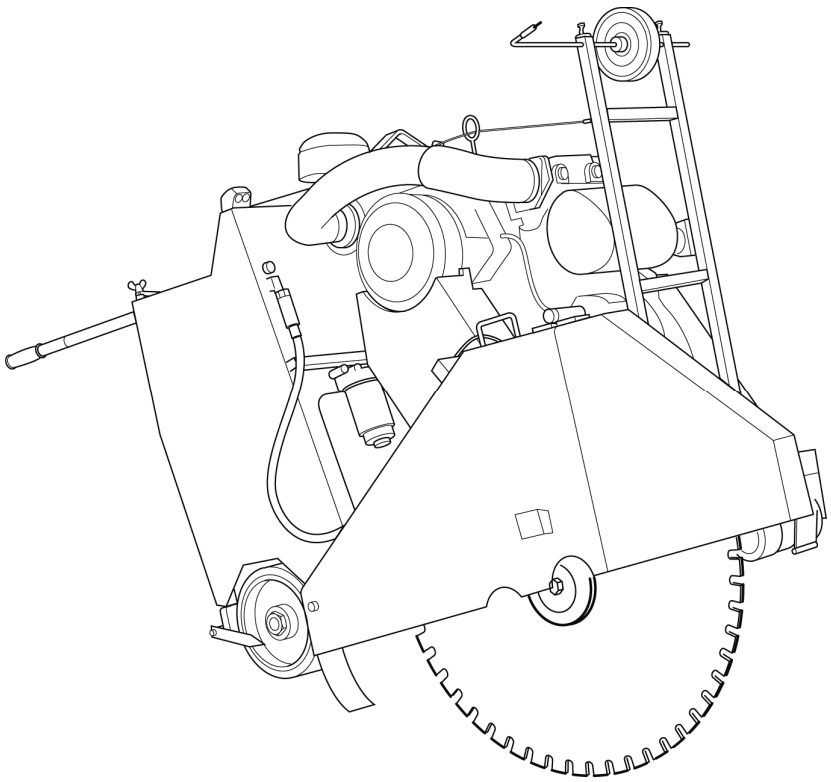
Operating Instructions

Floor Saw FSD1049★★★

Index 001



10993834 EN / 28.11.2012

Congratulations!

You have decided to purchase a tried and tested TYROLIT-Hydrostress unit and have thus acquired a highly sophisticated and reliable state-of-the-art unit. The exclusive use of only TYROLIT Hydrostress spare parts ensures quality and interchangeability. If maintenance work is neglected or carried out inexpertly we will be unable to honour our warranty obligations. Any repair work must be carried out by trained personnel only.
Should you need more details concerning your TYROLIT Hydrostress unit in order to keep it in perfect condition, please contact our after-sales service for further information.
We hope that you enjoy untroubled and fault-free working with your TYROLIT unit.

TYROLIT Hydrostress

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1 Safety

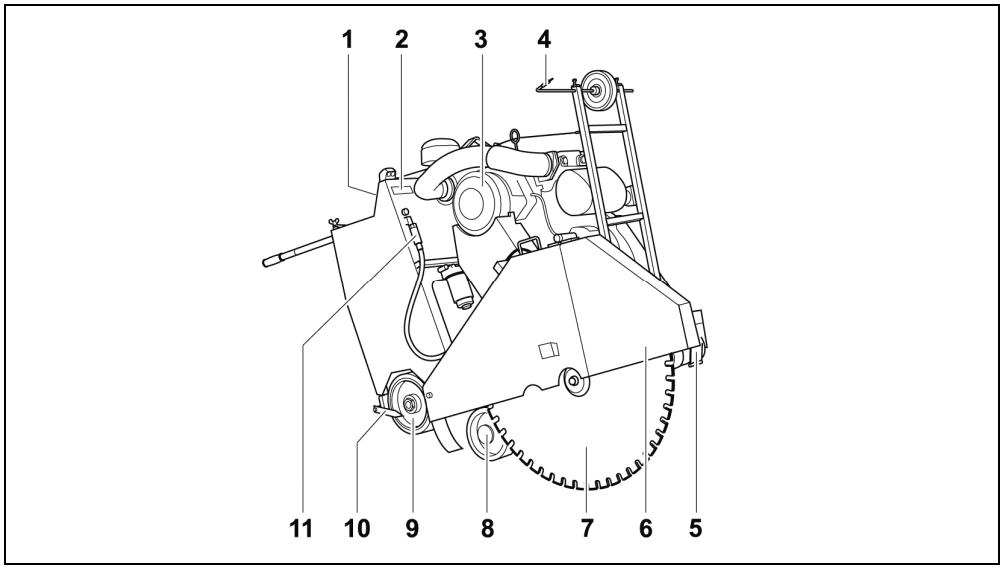
These instructions are just one part of the documentation which is supplied together with the floor saw. These instructions go together with the "Safety Manual / System Description for Floor Saws" to form a complete set of documentation.

DANGER

Failure to comply with the safety instructions in the "Safety Manual / System Description" may result in serious injury or death.

► Please ensure that the "Safety Manual / System Description for Floor saws" has been read and understood in full.

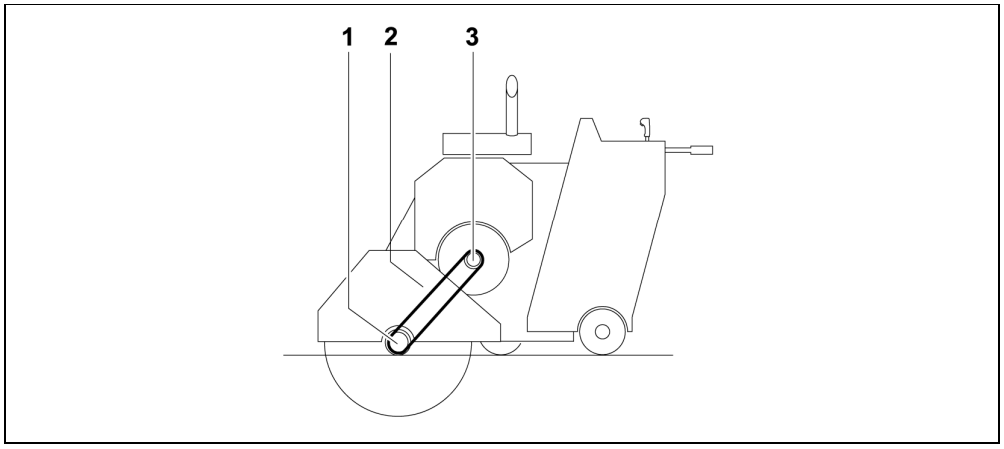
2 Design



Components

1	Operating console	5	Shaft cover	9	Drive wheel
2	Name plate	6	Blade guard	10	Rear cut guide
3	Main motor	7	Saw blade	11	Water feed
4	Front cut guide	8	Rocker wheel		

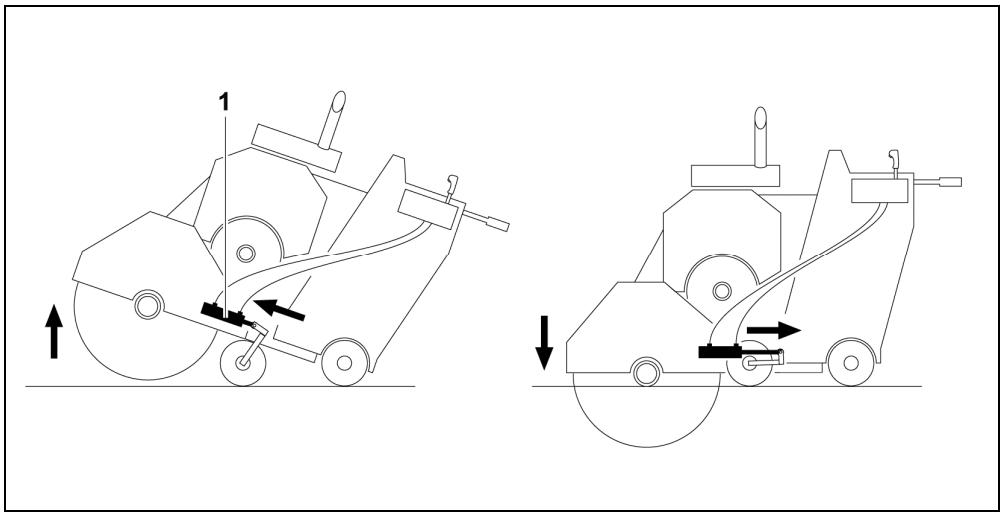
2.1 Saw blade drive



Saw blade drive (schematic)

1 Blade drive shaft
2 Drive belt
3 Main motor drive shaft

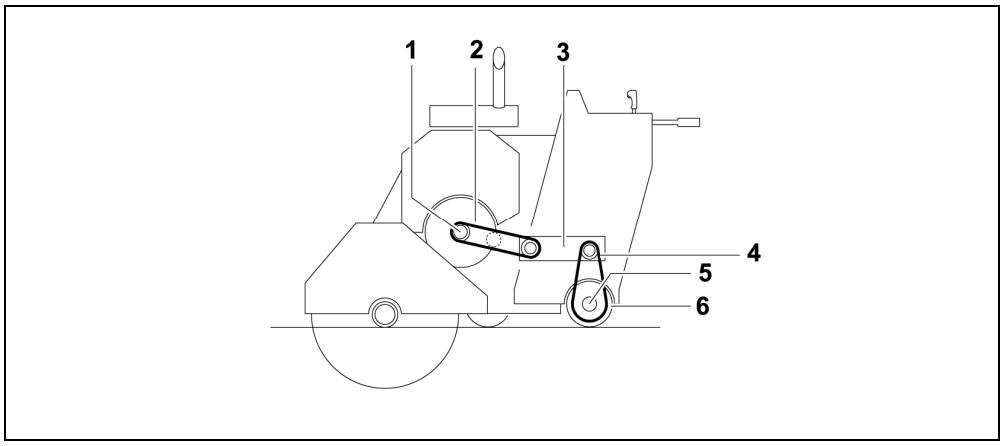
2.2 Lift drive



Lift drive (schematic)

1 Hydraulic cylinder

2.3 Travel drive



Travel drive (schematic)

1 Drive shaft (main motor)
2 Hydrostat drive belt
3 Hydrostatic motors
4 Wheel drive shaft
5 Drive chain
6 Drive wheel

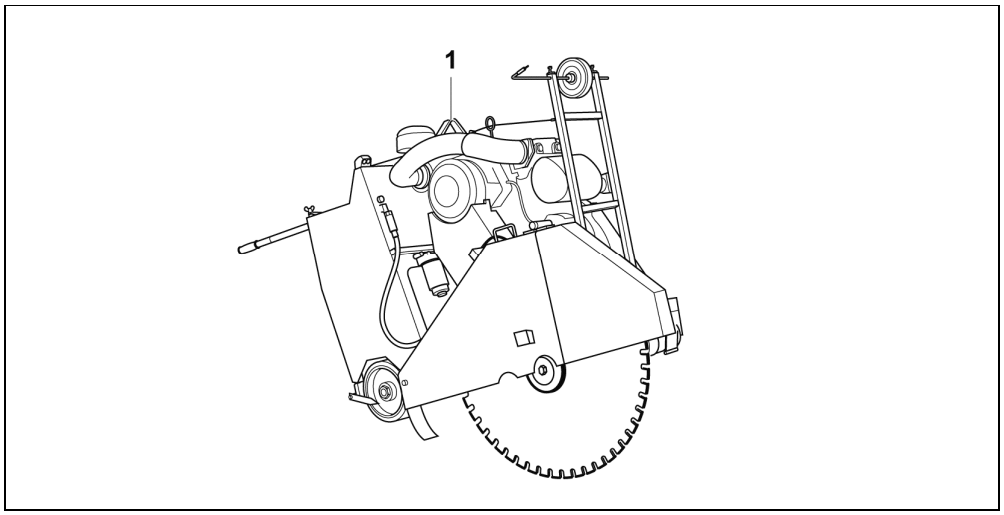
3 Transport

DANGER

Inexpert transport may result in death or serious injury.

- ► Floor saws must only be transported with the main motor switched off.
- ► Only transport vehicles, lifting tools and load suspension devices with sufficient load-bearing capacity must be used.
- ► Floor saws must only be hitched by the hitching points provided.
- ► Appoint an expert marshaller.
- ► When transporting by crane do not stand underneath suspended load.
- ► Always have the floor saw in your line of vision while it is being transported.

3.1 Hitching points

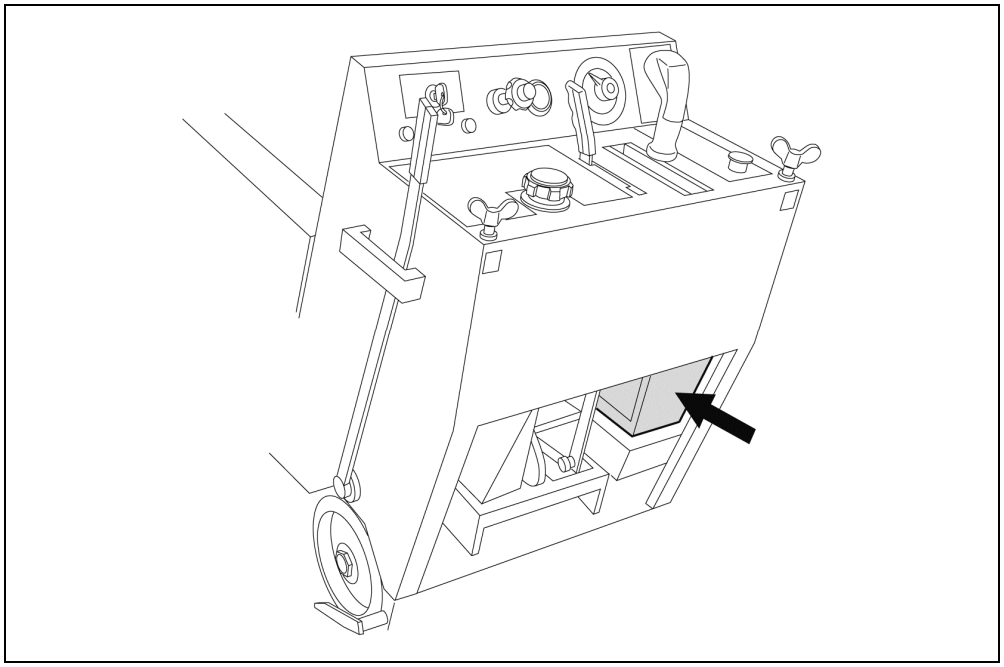


Hitching points

1 Crane hitching device

4 Initial start-up

4.1 Fitting battery

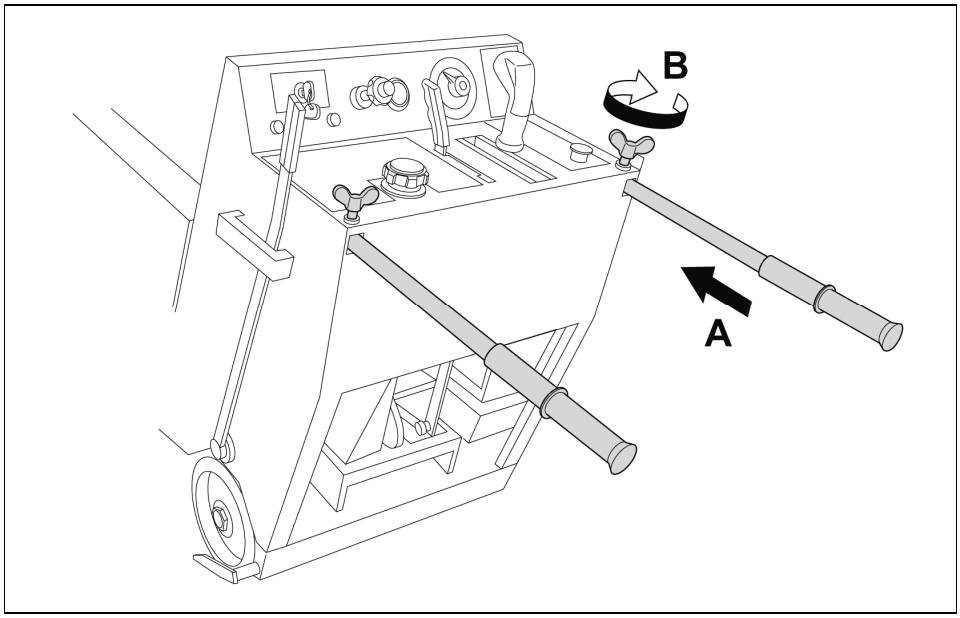


► Fit battery (for type see Technical Data).

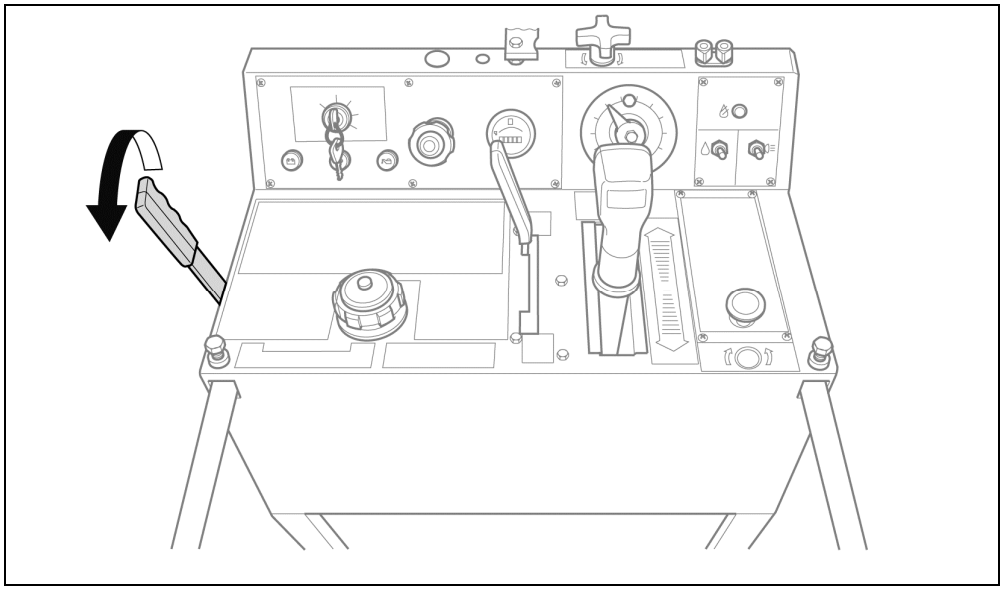
5 Assembly / Set-up

5.1 Mounting grip

►

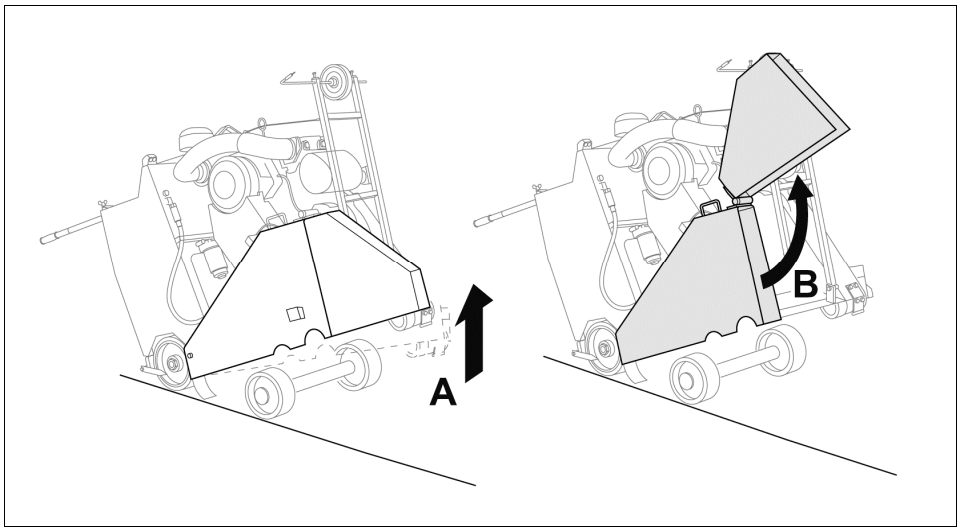


5.2 Mounting saw blade



1. Apply hand brake

2.



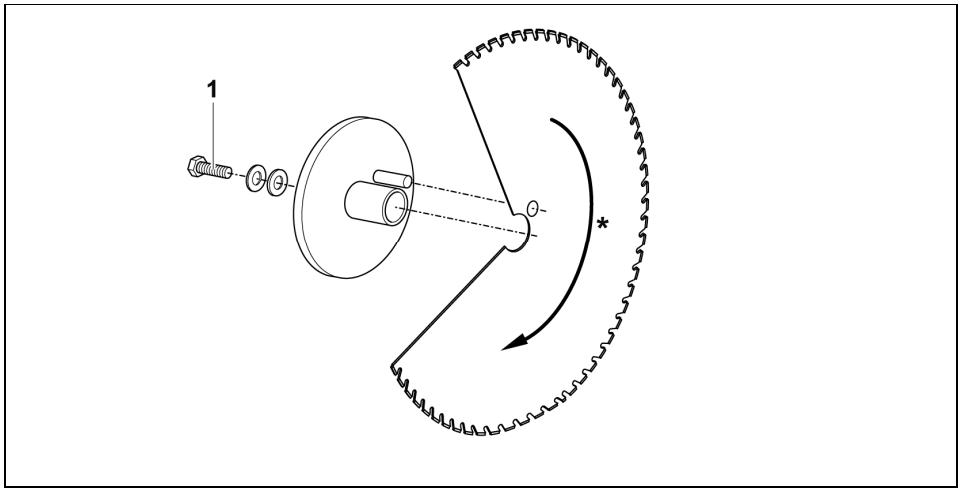
DANGER

Parts that fly off (segments, concrete splinters, saw blade, etc.) may cause serious injury or even death.

- ► Floor saws must only be operated with a blade guard.
- ► When assembling the saw blade on the right-hand side use the anchoring screw with the left-hand thread.
  When assembling the saw blade on the left-hand side, use the anchoring screw with the right-hand thread.

- ► Note the direction or rotation arrows on the saw blade.

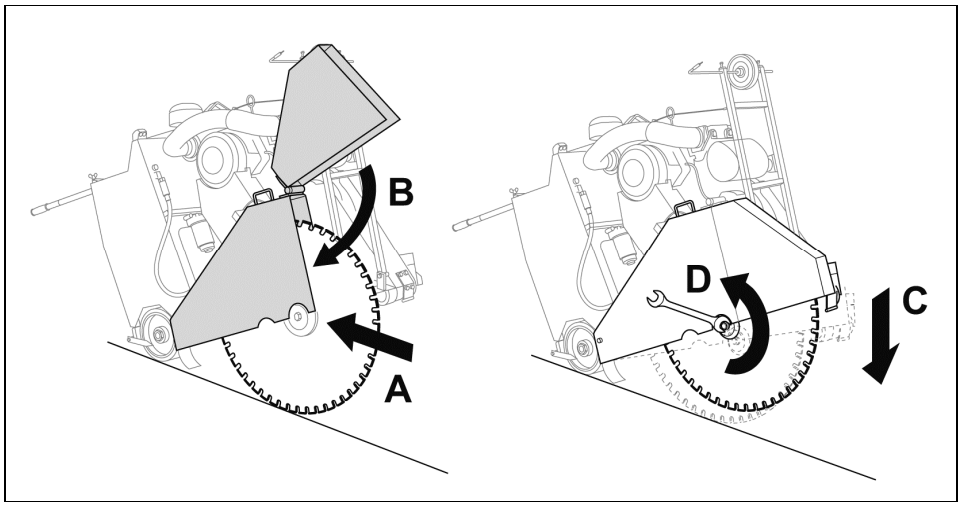
3.



1 Anchoring screw

*Note the direction of rotation

4.

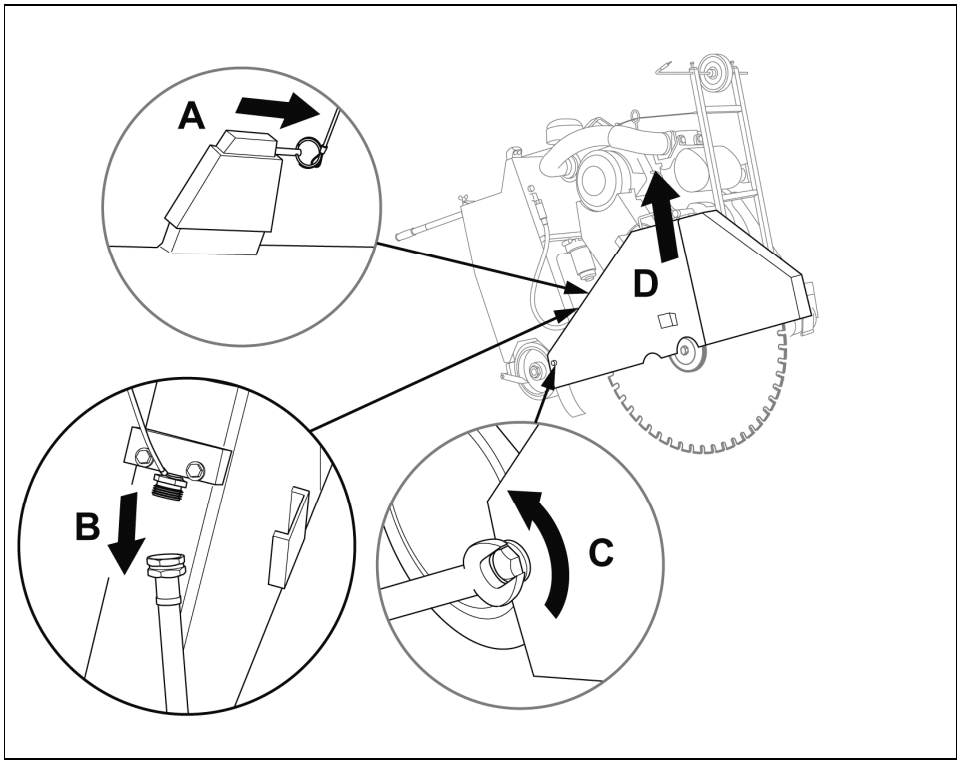


C: To prevent the saw blade rotating while being tightened, carefully place the saw blade on the floor.

5.3 Mounting saw blade on the other side

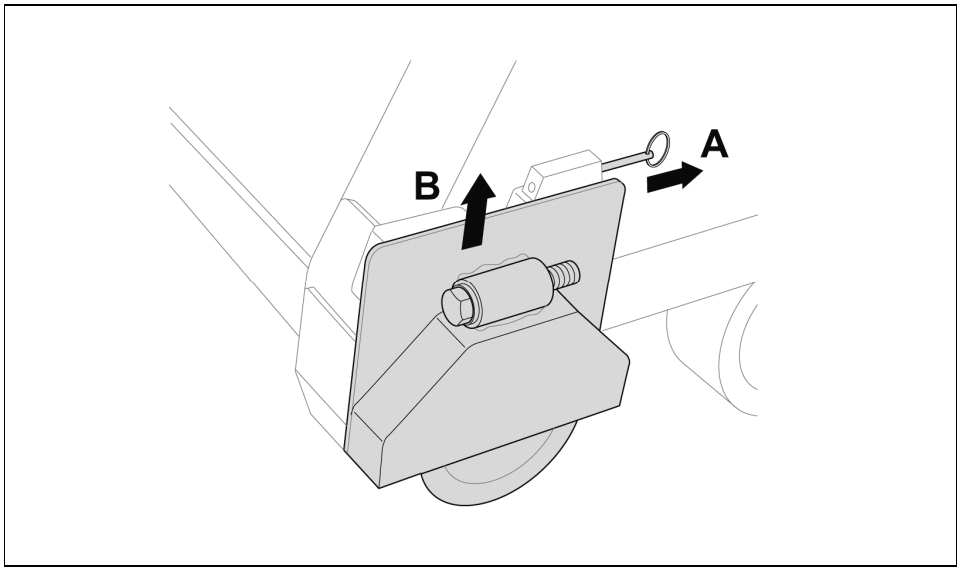
5.3.1 Disassemble the blade guard

►



5.3.2 Disassemble the shaft cover

►

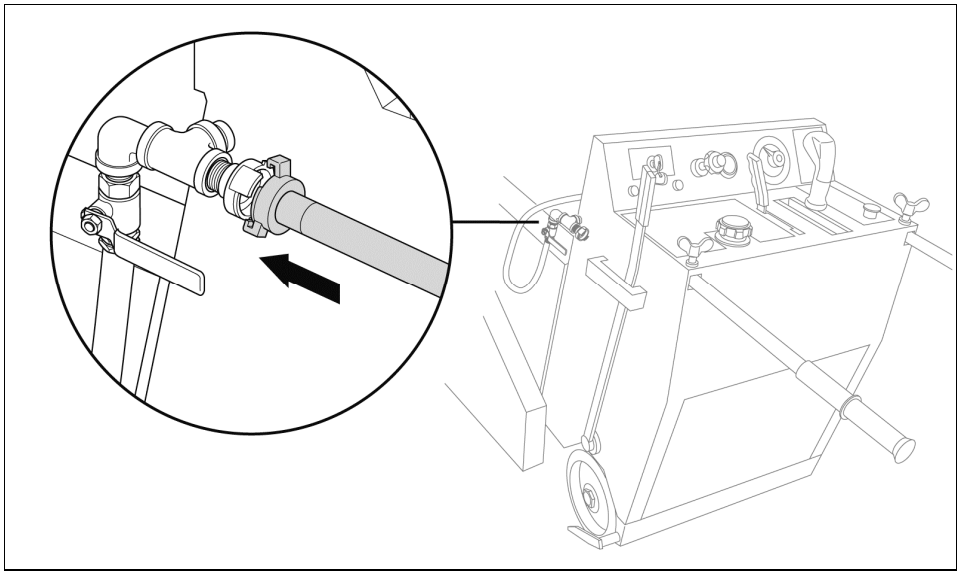


5.3.3 Assembling the blade guard and shaft cover on the other side

Assembly of the blade guard and the shaft cover is performed in the opposite order to disassembly.

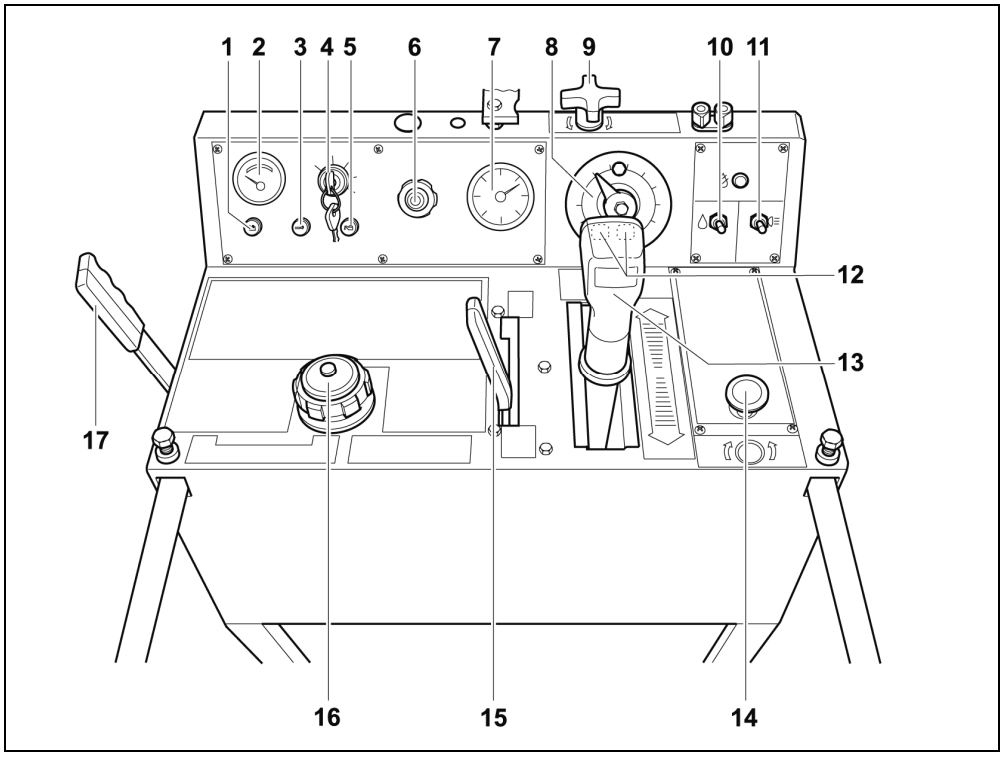
5.4 Connecting water line

►



6 Operation

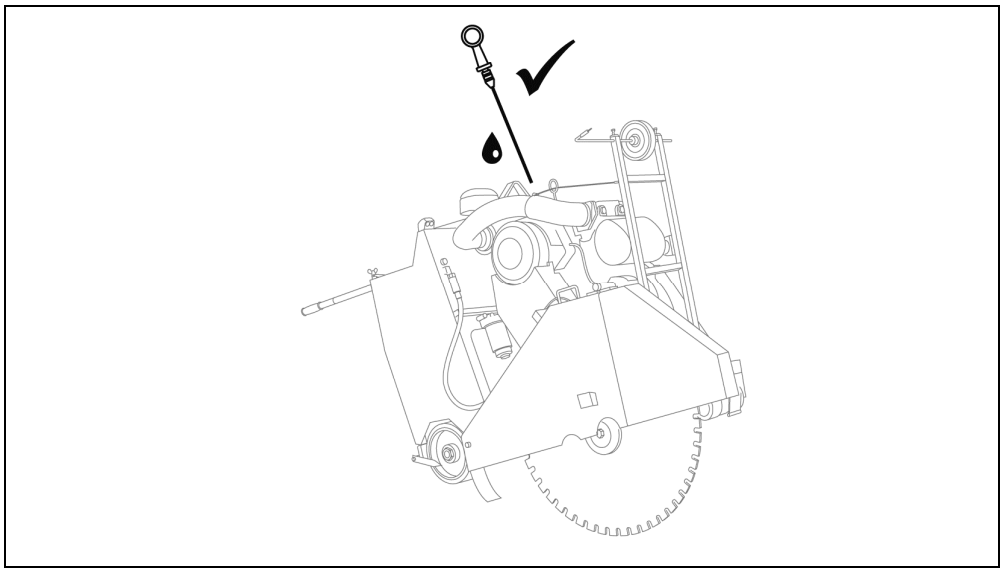
6.1 Overview of operating elements



Operating elements

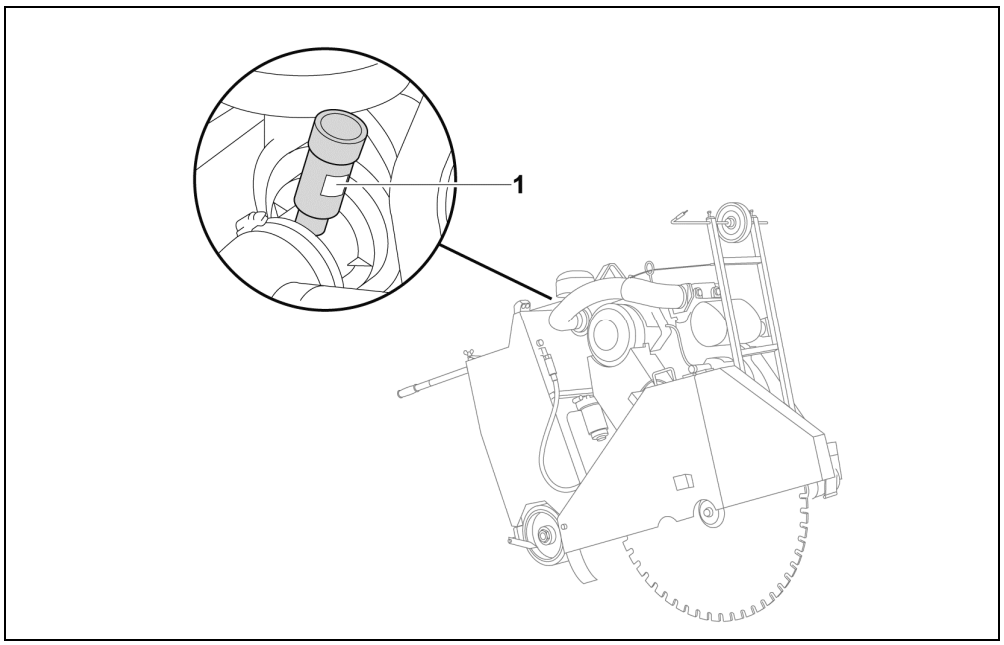
1 Battery display
2 Motor temperature display
3 Oil temperature display
4 Ignition key
5 Oil pressure display
6 Speed governor
7 Cutting shaft revolution counter / Operating hours counter
8 Cutting depth indicator
9 Bit stop locking
10 On / Off control for internal water pump
11 On / Off control for headlight
12 Raise / Lower buttons
13 Feed adjuster (forward / backward travel)
14 **EMERGENCY STOP** switch
15 Feed gears coupling lever
16 Tank cover with tank display
17 Hand brake

6.2 Checking oil level



► Note the details from the motor manufacturer.

6.3 Checking the air filter

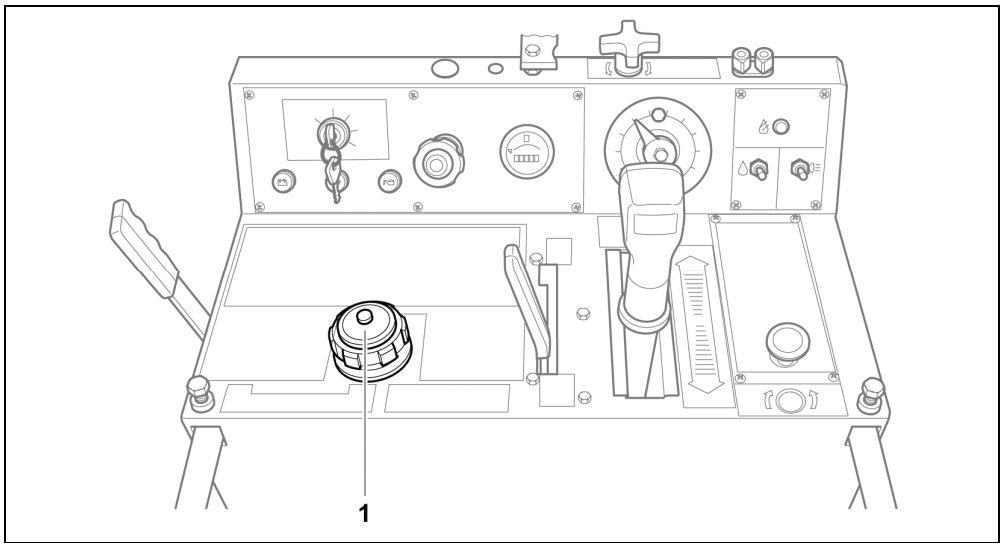


The display in the window (1) has the following significance:

Display colour	Significance
Yellow	Air filter in good order
Red	Air filter blocked

► If the air filter is blocked, it must be changed.

6.4 Checking the fuel level



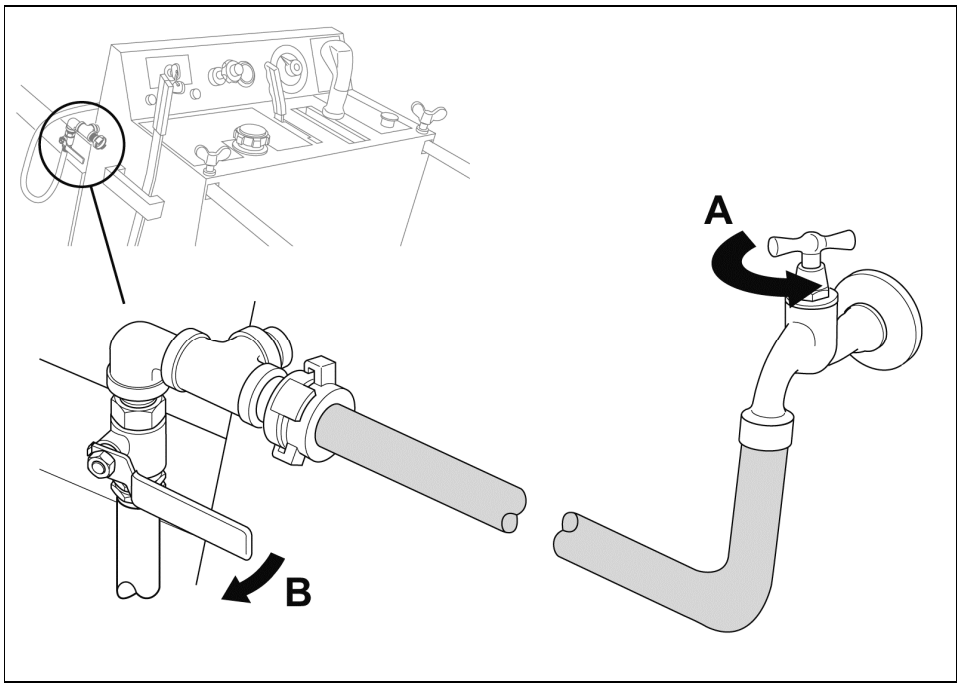
► Check the tank display (1) and top up with diesel as necessary.

6.5 Positioning the floor saw

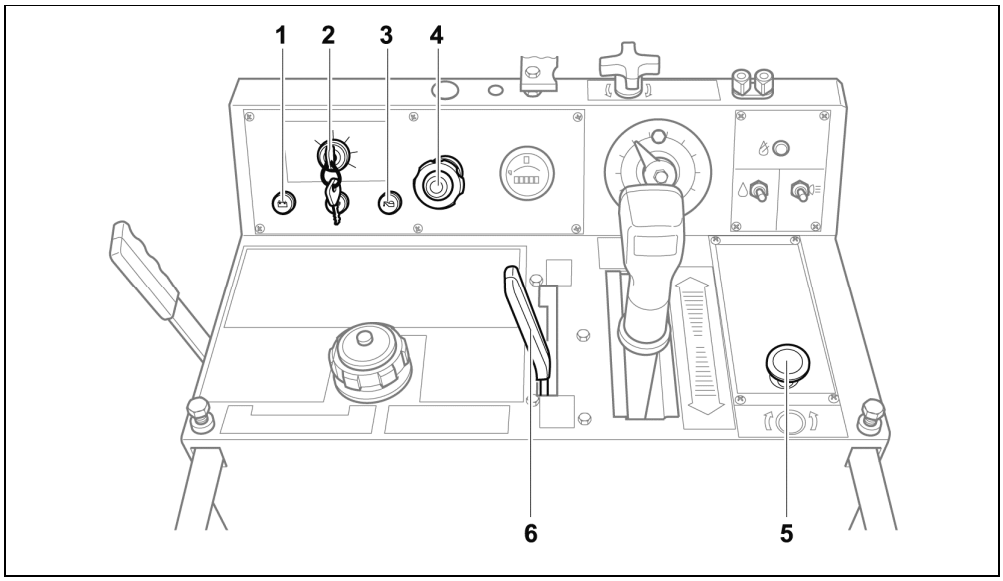
1. Release the hand brake.
2. Slide floor saw into the working position.
3. Fit the cutting guides to the floor saw.

6.6 Connecting the water supply

►



6.7 Switch on motor



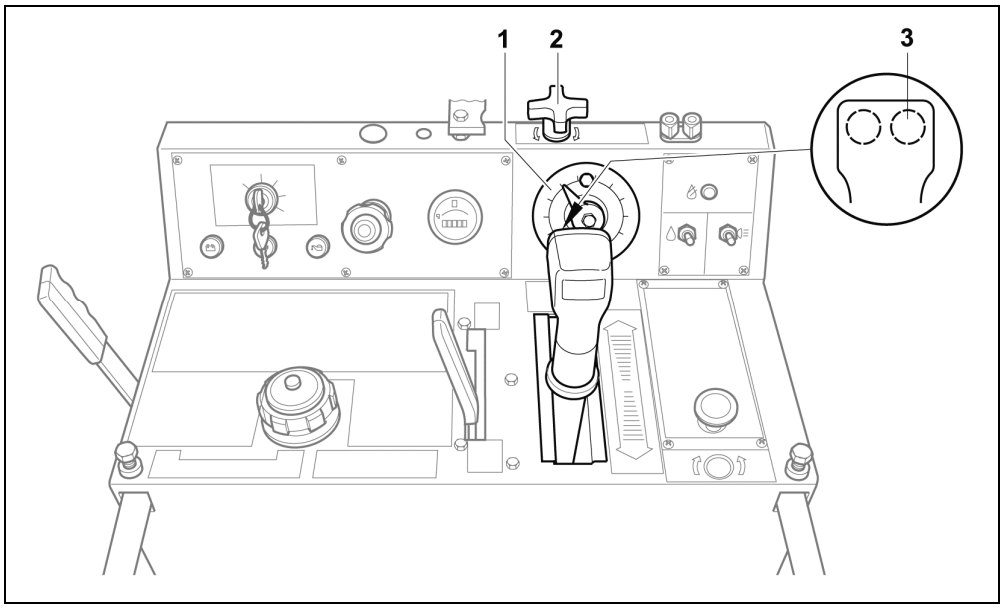
Symbol	Significance
	Coupling lever in coupled position
	Coupling lever in uncoupled position

✓ Coupling lever (6) is in the uncoupled position
✓ **EMERGENCY STOP** switch (5) has been released

1. Turn ignition key (2) to the preheat position in order to preheat the motor.
2. Turn ignition key further to the right in order to start.
Battery and oil pressure displays (1, 3) light during starting and then go out.
3. Set motor speed with speed governor (4).

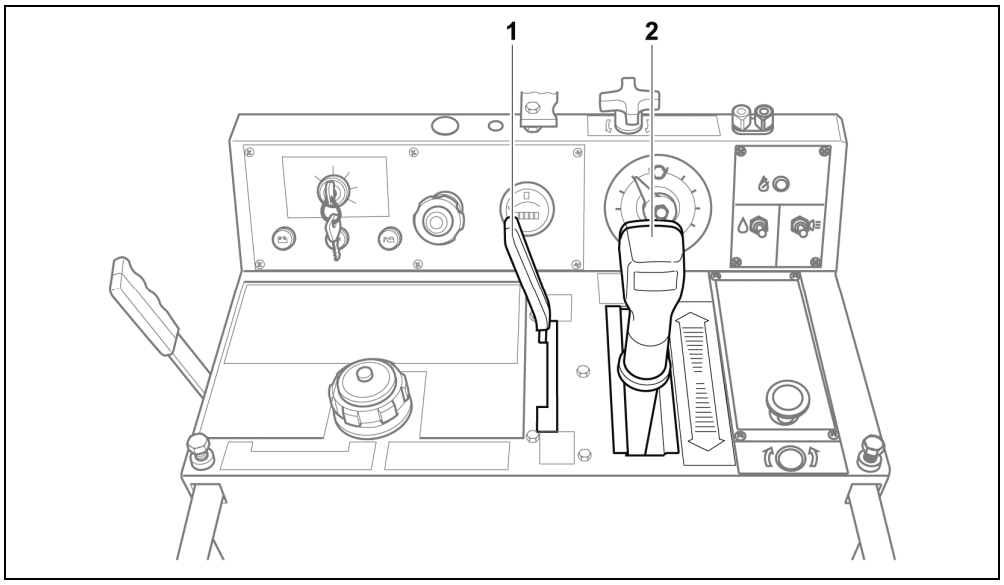
6.8 Lowering / raising saw blade

6.8.1 Lowering example



1. Press the **Lower** button (3) until the saw blade touches the material to be cut.
2. Set the cutting depth indicator (1) in the **0** position.
3. Using the **Lower** key, lower the saw blade to the desired cutting depth.
4. Tighten up the bit stop locking (2).

6.9 Adjusting the feed

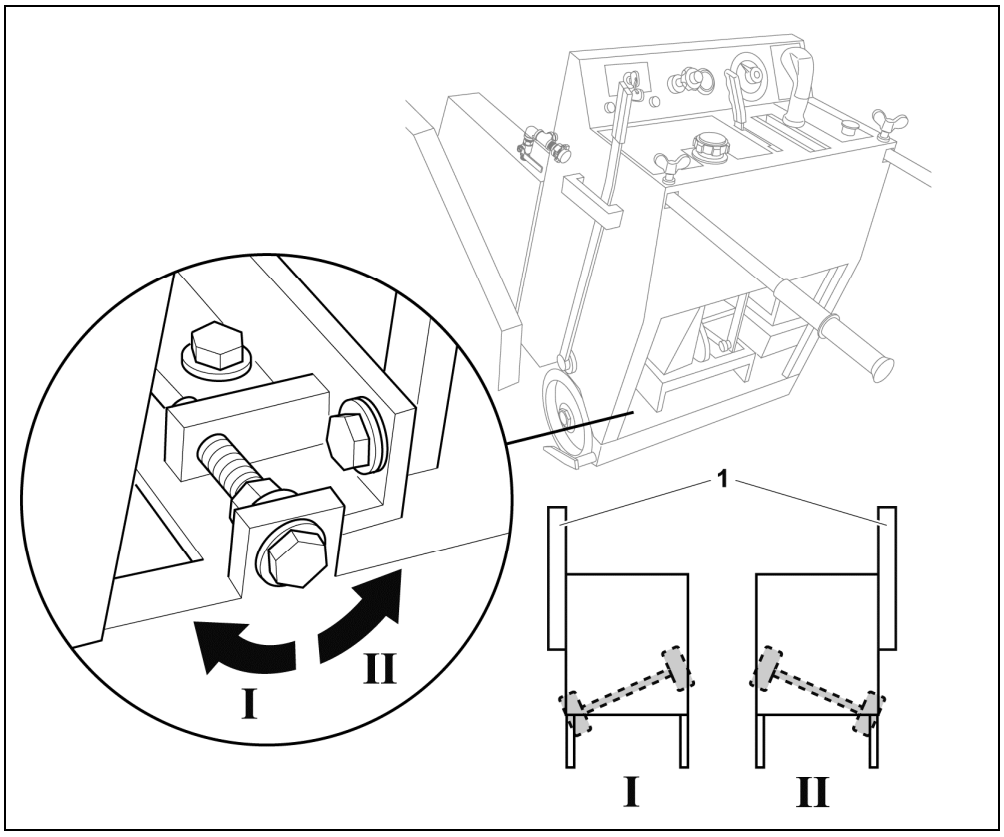


Symbol	Significance
	Coupling lever in coupled position
	Coupling lever in uncoupled position
	Feed adjuster in the forwards direction of travel
	Feed adjuster in the backwards direction of travel

✓ Feed adjuster is in the neutral position
✓ Hand brake has been released

1. Place coupling lever (1) in the coupled position.
2. Using the feed adjuster (2), set the direction of travel and speed.

6.10 Correcting the tracking



Correcting the tracking

1 Saw blade

► If the saw blade drifts, adjust the rear axle with the adjusting screw.

6.11 Gear selection procedure for 3-speed gearbox

DANGER

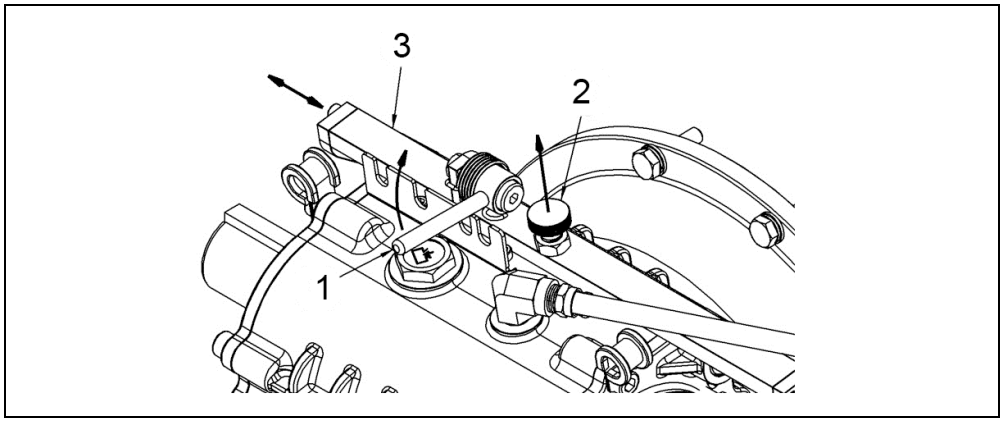
Failure to follow instructions can result in death or serious injury.

The gear can only be changed if the motor is stationary. Never tamper with the gear selection mechanism with the motor running.

6.11.1 Gear selection procedure

INFORMATION

No tools are required for the entire selection procedure.



1. Stop the motor.
2. Open the motor cover.
3. Push the gear selection lever (1) upwards and release the locking mechanism (2).
4. Slide the gear selection lever to the desired gear position.

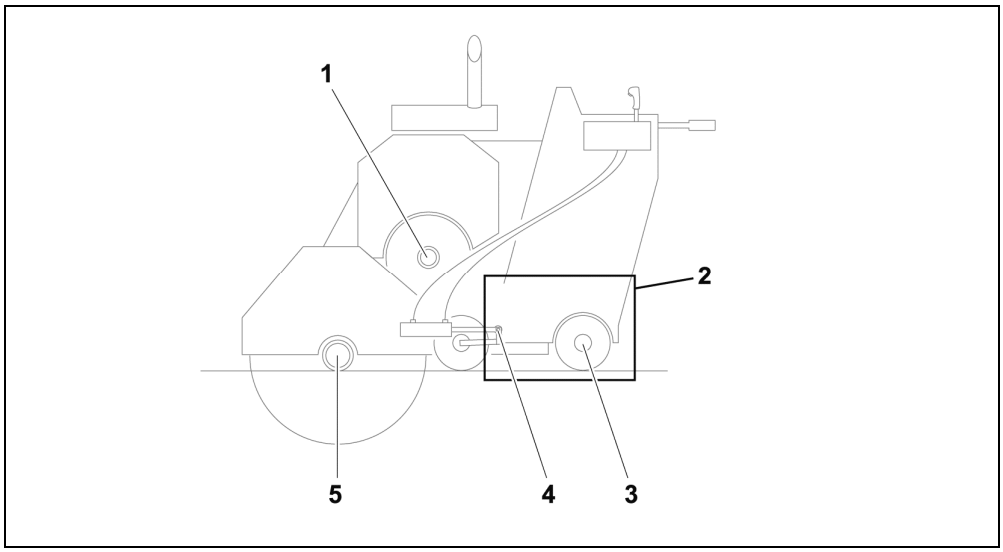
Gear position (designations)	
M = Medium	► Medium speed
L = Low	► Low speed
N = Neutral	► No gear engaged
H = High	► High speed

5. Push the gear selection lever (1) into the recess for the required gear position.
6. Secure the gear position using the locking element (2).

7 Maintenance

When?	What?
Daily	► Check oil level. ► Perform a visual check for damage.
Weekly	► Check belt and chain tension and adjust as necessary.
Every 50 hours of operation	► Lubricate grease nipples.
Annually or every 100 operating hours	► Arrange a major service by TYROLIT Hydrostress AG or an authorised representative.
According to the information from the motor manufacturer	► Carry out all necessary measures in accordance with the operating instructions of the motor manufacturer.

7.1 Grease nipples



Position of grease nipples

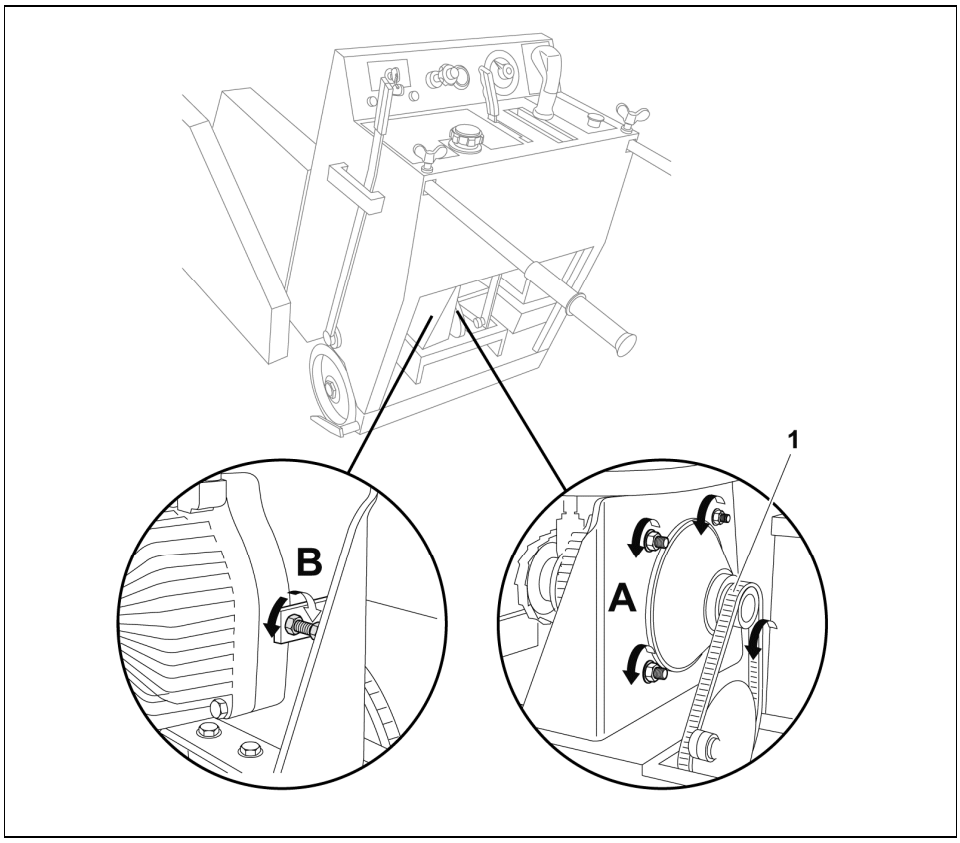
1 Motor: 1 item
2 Feed adjuster control rods: 4 items
3 Wheel drive shaft bearing: 2 items
4 Cylinder eye: 1 item
5 Blade drive shaft: 2 items

7.2 Tensioning belt on travel drive

► Remove the appropriate number of belt links until the belt is tensioned.

7.3 Tensioning chain on travel drive

►



Tensioning chain

1 Chain

8 Malfunctions

Malfunction	Possible cause	Solution
Floor saw does not operate	**EMERGENCY STOP** switch has been pressed.	► Release **EMERGENCY STOP** switch.
Saw blade jammed	Saw blade is jammed in the cutting material	► Reverse the floor saw. ► If necessary release the saw blade by rocking. ► If necessary stop the motor, disassemble the saw blade and release this individually from the cutting material.
Saw blade does not rotate even though the motor is running	Belt tension too slack	► Tension or replace belt.
	Pulling pin on the anchoring flange has sheared off	► Mount new anchoring flange.
Feed not working	Operation of the control rods impaired	► Check control rods and repair as necessary.
	Defective hydrostat	► Check hydrostat and if necessary have this repaired by a TYROLIT Hydrostress engineer.
	Defective chain	► Have the chain replaced by a TYROLIT Hydrostress engineer.
	Main motor belt slipping	► Check belt for wear and if necessary have this replaced by a TYROLIT Hydrostress engineer. ► Increase belt tension as necessary.
Motor running off centre	Wrong fuel	► Switch off motor immediately and change fuel.
	Diesel filter blocked	► Have diesel filter changed.
Battery display lights	Defective contacts on the connection between battery and generator	► Check contacts and re-establish these as necessary.
	Inadequate battery charging	► Charge or change battery.
Oil temperature display lights	Oil temperature too high	► Allow floor saw to run under no load until temperature display goes off.
	Too little oil	► Top up oil.
Oil pressure display lights	Defective oil pump	► Have oil pump changed.
Motor temperature display pointer in red zone	Motor overloaded	► Allow motor to run under no load for a few minutes.

9 Technical data

9.1 Dimensions

Parameter	Value
Weight	775 kg
Cutting depth (max.)	430 mm
Blade uptake diameter	25.4 mm
Max. saw blade diameter	900 mm
Dimensions (transport dimensions with blade guard folded up)	L: 1,390 mm W: 970 mm H: 1,290 mm

9.2 Motor

Parameter	Value
Type	DEUTZ
Power	49 HP
Rated speed	According to operating instructions from motor manufacturer
Oil content	According to operating instructions from motor manufacturer
Tank content	34.2 l
Fuel	Diesel
Cooling	Air cooling

9.3 Lift drive

Parameter	Value
Drive type	Electro-hydraulic
Oil grade	ATF Dexron II D

9.4 Travel drive

Parameter	Value
Drive type	Hydraulic
Oil grade	ATF Dexron II D
Cooling	Air cooling by means of cooling ribs

9.5 Noise level and vibrations

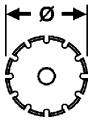
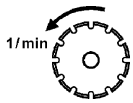
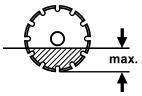
Parameter	Value
Noise level at workplace (L_{PA})	91.4 dB(A)*
Sound power level in accordance with ISO 3744 (L_{WA})	111.4 dB(A)*
Vibrations DIN EN ISO 5349-2	< 2.5 m/s^2

*Value applies under the following condition: Travel drive is switched off and the saw blade is not engaged. The measurement is performed with the motor under full load with the saw blade dia. 900 mm. Higher noise levels may be generated in cutting operation.

9.6 Battery

Parameter	Value
Description	Battery 12-Volt Group Size 24
DP battery part number	2800465
Length	260 mm
Width	173 mm
Height	225 mm
Capacity	600 Amps
Manufacturer's reference	P7029

9.7 Cutting data

Blade diameter	Blade rpm	operation	Motor rpm	Depth of cut
500 mm	2700	**H** (High)	2700	185
700 mm	1800	**M** (Medium)	2700	285
1000 mm	1200	**L** (Low)	2700	410
				

The gear may only be changed if the motor is stationary. Never tamper with the gear selection mechanism with the motor running.

EC declaration of conformity

Description	Floor Saw
Type designation	FSD1049★★★
Year of construction	2007
Manufacturer	TYROLIT Hydrostress AG

We declare under our own liability that this product complies with the following directives and standards:

Directive applied

Machine Directive	2006/42/EC
Noise Emission	2000/14/EC
Exhaust Directives	2004/26/EC

Standards

EN 12100	Safety of machinery – Basic concepts, general design principles.
EN 982	Safety of machinery Safety requirements for safety systems and their components – hydraulics.
EN ISO 3744	Acoustics – Determination of sound power levels of noise sources using sound pressure